AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. (cancelled).

14. (currently amended) A method for planarizing a front surface of a wafer comprising the steps of:

~~a)~~ pressing a front surface of a wafer against a working surface;

~~b)~~ generating relative motion between the front surface of the wafer and the working surface;

~~c)~~ transmitting a plurality of light signals to a plurality of concentric bands on the front surface of the wafer;

~~d)~~ receiving a plurality of reflected light signals from the plurality of concentric bands with a plurality of probes;

~~e)~~ communicating the reflected light from the plurality of probes to a metrology instrument;

~~f)~~ analyzing the plurality of reflected light signals from the plurality of concentric bands; and

~~g)~~ altering the planarization process based on the analysis by independently modifying a parameter of the planarization process in selected ones of said plurality of concentric bands.

15. (original) The method of claim 14 wherein the planarization process is altered by adjusting the pressure in one or more zones of a multizone carrier.

16. (currently amended) The method of claim 14 wherein the plurality of concentric bands on the front surface of the wafer overlap.

17. (original) The method of claim 14 wherein the generated relative motion comprises rotating the carrier and orbiting the working surface.

18. (original) The method of claim 14 wherein the plurality of light signals comprise multiple frequencies.

19. (original) The method of claim 14 wherein the metrology instrument comprises a spectrometer.

20. (currently amended) A method of monitoring and adjusting a planarization process, comprising the steps of:

~~a)~~ planarizing a front surface of a wafer using an initial set of process parameters;

~~b)~~ taking measurements at various positions across the front surface of the wafer while planzarizing the wafer;

~~c)~~ analyzing the measurements; and

~~d)~~ altering a pressure within one or more zones of a multizone carrier based on the analysis of the measurements while planarizing the wafer.

21. (currently amended) The method of claim 20 further comprising the step of:

~~e)~~ associating the measurements with locations on the front surface of the wafer.

22. (previously presented) The method of claim 21 wherein the measurements are associated with locations on the front surface of the wafer in two axes.

23. (previously presented) The method of claim 21 wherein the radial position of the measurements is associated with locations on the front surface of the wafer.

24. (previously presented) The method of claim 21 wherein the measurements are taken using an interrogation signal comprising multiple frequencies.

25. (previously presented) The method of claim 21 wherein the measurements are taken using an interrogation signal comprising a single frequency.

26. (currently amended) The method of claim 21 further comprising the step of:

~~f)~~ altering the initial set of process parameters for subsequently planarized ~~wafers~~ based on the analysis of the measurements.

27. (currently amended) The method of claim 21 wherein the step of analyzing ~~e)~~ comprises comparing a clearing time for a plurality of different areas on the front surface of the wafer.

28. (previously presented) The method of claim 27 wherein the plurality of different areas comprises a plurality of concentric zones on the front surface of the wafer.

29. (currently amended) The method of claim 21 wherein the step of analyzing ~~e)~~ comprises comparing an end point time for a plurality of different areas on the front surface of the wafer.

30. (previously presented) The method of claim 29 wherein the plurality of different areas comprises a plurality of concentric zones on the front surface of the wafer.

31. (currently amended) A method for planarizing a front surface of a wafer, comprising the steps of:

~~a)~~ pressing a front surface of a wafer within a multizone carrier against a working surface, wherein each zone in the multizone carrier is pressurized to a corresponding initial pressure;

~~b)~~ generating relative motion between the front surface of the wafer and the working surface;

~~c)~~ transmitting a light signal to a front surface of the wafer;

d) receiving the reflected light signal from the front surface of the wafer;

e) communicating the reflected light signal to a metrology instrument;

f) converting the reflected light signal into data;

g) communicating the data to a control system;

h) analyzing the data; and

i) altering the planarization process based on the analysis of the data.

32. (currently amended) The method of claim 31 wherein the step of altering i) comprises altering the initial pressure within one or more zones of the multizone carrier.

33. (currently amended) The method of claim 32 wherein the step of analyzing h) comprises comparing a clearing time plurality of different areas on the front surface of the wafer.

34. (previously presented) The method of claim 33 wherein the plurality of different areas comprises a plurality of concentric zones on the front surface of the wafer.

35. (currently amended) The method of claim 31 wherein the step of analyzing h)comprises comparing an end point call time for a plurality of different areas on the front surface of the wafer.

36. (previously presented) The method of claim 35 wherein the plurality of different areas comprises a plurality of concentric zones on the front surface of the wafer.

37. (currently amended) The method of claim 31 further comprising the step of:

j) altering the initial pressure within one or more zones of the multizone carrier based on the analysis of the data for subsequently planarized wafers.